

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

COLOMBIA

**PROGRAM TO SUPPORT THE NATIONAL ENVIRONMENTAL
SYSTEM (SINA II)**

(CO-0262)

LOAN PROPOSAL

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BASIC SOCIOECONOMIC DATA

For basic socioeconomic data, including public debt information, please refer to the following address:

<http://www.iadb.org/RES/index.cfm?fuseaction=externallinks.countrydata>

INFORMATION AVAILABLE IN THE RE3/EN3 FILES

Preparation:

1. Draft Operating Regulations
2. Draft annual work plan
3. Physical execution schedule
4. Budget execution schedule
5. Consultancy paper, “Aspectos de género y minoría en la ejecución del Programa Ambiental Nacional” [Gender and minority considerations in executing the National Environmental Program] (October 2002).
6. Consultancy paper, “Evaluación por muestra del impacto de proyectos financiados por el Programa Ambiental Nacional” [Assessment, by sample, of the impact of projects financed by the National Environmental Program] (October 2002).
7. Consultancy paper, “Evaluación de proyectos de desarrollo institucional en medio ambiente—Colombia: Programa Ambiental” [Evaluation of institutional development environment projects—Colombia: Environmental Program].
8. MAVDT document, “Logros y avances del Programa Ambiental” [Environmental Program achievements and progress.] Final Completion Report 1994-2003. IDB loans 774/OC-CO and 910/SF-CO (July 2003).
9. MMA working document, “El gasto público ambiental” [Environmental public expenditure] (May 2002).
10. Projects potentially eligible for financing

Information available in the Luis Felipe Herrera Library

1. MMA book. Las voces del SINA—Reportaje al Sistema Nacional Ambiental [SINA voices—Report on the National Environmental System] (2002).
2. MMA book. Logros y avances de la gestión ambiental en Colombia—Proyecto Colectivo Ambiental. Informe de Gestión 1998-2002 [Environmental management achievements and progress in Colombia—Collective Environmental Project. Management Report 1998-2002] (2002).

ABBREVIATIONS

ARCs	Autonomous Regional Corporations
AWP	annual work plan
CC	Cabinet Council
CESI	Committee on Environment and Social Impact
CONPES	Consejo Nacional de Política Económica y Social [National Economic and Social Policy Council]
DNP	National Planning Department
EIF	Environmental Investments Fund
EIRR	economic internal rate of return
FONAM	National Environmental Fund
GGE	Grupo de Gestión Forestal [Forest Management Group]
GPFBM	Grupo de Planeación Financiera y Programas Banca Multilateral [Financial Planning and Multilateral Bank Program Group]
IBRD	International Bank for Reconstruction and Development
IDB	Inter-American Development Bank
IDEAM	Instituto de Hidrología, Meteorología y Estudios Ambientales [Colombian Institute of Hydrology, Meteorology, and Environmental Research]
LIBOR	London Interbank Offered Rate
MAVDT	Ministry of the Environment, Housing, and Land Development
MMA	Former Ministry of the Environment
NGO	Nongovernmental organization
OC	Ordinary Capital.
OR	Operating Regulations
OVE	Office of Evaluation and Oversight
PCA	Proyecto Colectivo Ambiental [Collective Environmental Program]
PCR	Project completion report
PTI	Poverty-targeted investment
SAL	Structural adjustment loan
SEQ	Social equity-enhancing project
SIA	Sistema de Información Ambiental [Environmental Information System]
SIAC	Colombia's National Environmental Information System
SINA	National Environmental System
SINA I	IDB program financed with loans 770/OC-CO and 910/SF-CO
SINA II	IDB program to be financed with the proposed loan
SMEs	Small and medium-sized enterprises
TAL	Technical assistance loan
TOR	Terms of reference
UEA	Urban Environmental Authority



COLOMBIA

IDB LOANS

APPROVED AS OF APRIL 30, 2004

	US\$Thousand	Percent
TOTAL APPROVED	10,890,439	
DISBURSED	10,227,794	93.91 %
UNDISBURSED BALANCE	662,645	6.08 %
CANCELATIONS	1,050,999	9.65 %
PRINCIPAL COLLECTED	5,316,191	48.81 %
APPROVED BY FUND		
ORDINARY CAPITAL	10,070,088	92.46 %
FUND FOR SPECIAL OPERATIONS	758,352	6.96 %
OTHER FUNDS	62,000	0.56 %
OUTSTANDING DEBT BALANCE	4,911,603	
ORDINARY CAPITAL	4,733,057	96.36 %
FUND FOR SPECIAL OPERATIONS	178,277	3.62 %
OTHER FUNDS	269	0.00 %
APPROVED BY SECTOR		
AGRICULTURE AND FISHERY	545,821	5.01 %
INDUSTRY, TOURISM, SCIENCE AND TECHNOLOGY	528,240	4.85 %
ENERGY	2,838,953	26.06 %
TRANSPORTATION AND COMMUNICATIONS	735,327	6.75 %
EDUCATION	87,149	0.80 %
HEALTH AND SANITATION	830,836	7.62 %
ENVIRONMENT	130,025	1.19 %
URBAN DEVELOPMENT	567,890	5.21 %
SOCIAL INVESTMENT AND MICROENTERPRISE	2,694,164	24.73 %
REFORM AND PUBLIC SECTOR MODERNIZATION	1,897,212	17.42 %
EXPORT FINANCING	0	0.00 %
PREINVESTMENT AND OTHER	34,822	0.31 %

* Net of cancellations with monetary adjustments and export financing loan collections.



Inter-American Development Bank
Regional Operations Support Office
Operational Information Unit

Colombia

Tentative Lending Program

2004

Project Number	Project Name	IDB US\$ Millions	Status
CO0139	Program for the Reorganiz., Redesign and Moderniz. of Health Services Networks	72.0	APPROVED
CO0262	National Environmental System Support Program	20.0	
CO0263	Support of Privatizations and Concessions in Infrastructure-Second Stage	5.0	
CO0266	National Public Service Modernization Program	10.3	
CO0270	Public Services Sector Reform Program	400.0	
CO1003	National Rural Housing Program	30.0	
CO1001	Cali Integrated Transit System	150.0	
CO1002	Program to Support Vaccinations	70.0	
CO1004	Rehabilitation and Maintenance Highways (INVIAS)	50.0	
Total - A : 9 Projects		807.3	
TOTAL 2004 : 9 Projects		807.3	

2005

Project Number	Project Name	IDB US\$ Millions	Status
CO0267	Environmental Sanitation of Bogota - Phase I	50.0	
CO1005	Porce III Hydroelectric Power Plant	200.0	
CO1006	Sanitation Manizales and Villamaria	N/A	
Total - A : 3 Projects		250.0	
TOTAL - 2005 : 3 Projects		250.0	

Total Private Sector 2004 - 2005 **0.0**
Total Regular Program 2004 - 2005 **1,057.3**

* Private Sector Project



COLOMBIA

STATUS OF LOANS IN EXECUTION

AS OF APRIL 30, 2004

(Amount in US\$ thousands)

APPROVAL PERIOD	NUMBER OF LOANS	AMOUNT APPROVED*	AMOUNT DISBURSED	% DISBURSED
<u>REGULAR PROGRAM</u>				
Before 1998	9	293,012	249,523	85.16 %
1998 - 1999	5	98,166	46,040	46.90 %
2000 - 2001	3	303,000	156,122	51.53 %
2002 - 2003	6	611,569	266,989	43.66 %
2004	1	72,000	0	0.00 %
TOTAL	24	\$1,377,747	\$718,674	52.16 %

* Net of cancellations. Excludes export financing loans.

PROGRAM TO SUPPORT THE NATIONAL ENVIRONMENTAL SYSTEM (SINA II)

(CO-0262)

EXECUTIVE SUMMARY

Borrower:	Republic of Colombia	
Executing agency:	Ministry of the Environment, Housing, and Land Development (MAVDT)	
Amount and source:	IDB (OC):	US\$20.0 million
	Local counterpart:	US\$ 8.6 million
	Total:	US\$28.6 million
Financial terms and conditions:	Amortization period:	25 years
	Grace period:	4 years
	Execution period:	4 years
	Disbursement period:	4 years
	Currency:	Single Currency Facility in U.S. dollar

The interest rate, credit fee, and inspection and supervision fee mentioned in this document are established pursuant to document FN-568-3 Rev. and may be changed by the Board of Executive Directors, taking into account the available background information, as well as the respective Finance Department recommendation. In no case will the credit fee exceed 0.75%, or the inspection and supervision fee exceed 1% of the loan amount.¹

Interest rate:	Adjustable option
Credit fee:	0.25%
Inspection and supervision fee:	0%

¹ With regard to the inspection and supervision fee, in no case will the charge exceed, in a given six-month period, the amount that would result from applying 1% to the loan amount, divided by the number of six-month periods included in the original disbursement period.

Objectives: The program's objective is to help improve the status of natural resources and the environment, in order to promote sustainable development in Colombia and to improve environmental management by the agencies that are part of the National Environment System (SINA). To that end, environmental awareness must be enhanced and the SINA improved in terms of the formulation, implementation, and monitoring of environmental policies or strategies for environmental management and the implementation of programs and projects for the recovery, conservation, protection, management, use, and development of renewable natural and the environment through a participatory, consensus-based approach.

Description: To achieve the foregoing, the program would implement two components:

1. Institution-strengthening to consolidate the SINA

Component I, institution-strengthening to consolidate the SINA, seeks to support and strengthen environmental institutions, so they can better fulfill their policy implementation and environmental management functions. It is divided into the following subcomponents: (i) environmental information system; (ii) instruments and mechanisms for implementing environmental policies; (iii) education and training on the importance of conserving and managing natural resources and the environment; and (iv) technological support for the MAVDT.

2. Financing environmental investments

Component II, financing environmental investments, would cofinance priority environmental projects that are in line with national environmental policy. Those projects would be proposed by regional or local initiatives and would have regional and national benefits; and their environmental, social, and economic impact would justify funding by the national government. The component would leverage investments through the National Environmental Fund (FONAM) – Environmental Investment Funds (EIF) account, which would finance projects that meet the eligibility criteria set forth in the program Operating Regulations. The Government of Colombia has established three priority areas for Component II: (i) conservation, restoration, and sustainable management of forest ecosystems in watersheds; (ii) comprehensive solid waste management; and (iii) cleaner production.

Coordination with other multilateral organizations:

The World Bank has two operations in its pipeline for the environment: a technical assistance loan (TAL) for approximately US\$5 million and an environmental sector adjustment loan (SAL) for US\$100 million. The objective of the SAL is to incorporate environmental and sector considerations in the transportation, energy, housing, and water sectors. The objective of the TAL is to support coordination of the SAL activities. The IDB and World Bank programs are complementary, since they concern different areas of environmental management but within a framework of policy conditions consistent with the SINA II activities. While the proposed IDB program is designed to finance environmental investments by Autonomous Regional Corporations (ARCs) in natural resource management, the World Bank projects focus on environmental institutional strengthening in several sectors of economic activity.² The complementarity between the proposed IDB program and the World Bank programs was reviewed at working meetings with the MAVDT, and an active dialogue is being maintained on the preparatory studies for the TAL. The IDB has had the opportunity to comment on the terms of reference and plans to cooperate in document revision. The project team has been working in close association with the World Bank team preparing the TAL and SAL. The last orientation mission was even carried out jointly with the World Bank.

The Bank's country and sector strategy:

The proposed program is consistent with Bank guidelines for supporting Colombia's development. The Bank's strategy with Colombia, approved in September 2003, mentions as a priority focus, laying the foundations for economic revival, including support for natural resources management. This operation is fully in line with that objective, since it proposes consolidating an environmental management system that is aimed at the conservation and sustainable use of natural resources and the environment.

Environmental and social review:

The Committee on Environment and Social Impact (CESI) reviewed the project report of the operation at its 25 October 2002 meeting, indicating that the recommendations had been properly incorporated.

² This complementarity is described in the Bank Strategy with Colombia (document GN-2267-1), approved in September 2003.

Benefits:**1. Environmental**

With respect to natural resources, the reforestation programs begun under the Environmental Program (SINA I) will be continued.³ This will increase protective and productive-protective forest cover. Moreover, plans for managing water-producing watersheds, wetlands, mangroves, and moors will be implemented. As a result, the supply of environmental services will increase, with more and higher-quality water, carbon sequestration, and protection against natural hazards.

In terms of urban environmental quality, the proposed solid waste management activities would improve delivery of public sanitation services by subnational institutions. In the medium term, the project aims to increase the amount of garbage disposed of properly and reduce the dumping of pollutants into bodies of water. Moreover, the improved information that will be consolidated by Colombia's National Environmental Research and Information System (SIAC) will allow for more efficient allocation of resources.

2. Sustainability

The sustainability of SINA II is based both on the priority that the Government of Colombia accords to the National Environmental System and the high level of involvement of stakeholders in the System, as well as on the program's sources of counterpart funding. The necessary counterpart contribution for program execution comes primarily from the own revenue of SINA institutions. The local counterpart funding for the program will cover mainly the program execution expenses and part of the investments. In addition, for the projects financed under the environmental investment subcomponent, the subexecuting agencies are responsible for maintenance and other associated recurrent costs not covered under the program.

Own revenue of the Autonomous Regional Corporations has been and continues to be the largest source of counterpart contributions, since government contributions have been and continue to be squeezed by fiscal constraints. Contributions from own revenue have mushroomed from US\$67 million in 1998 to US\$161 million in 2003 (a 140% increase in five years) for investments and from \$32 million to US\$40 million (up 25%) for operations. In the last seven years, 84% of contributions to the National Environmental Systems came from own revenue of the ARCs.

³ The Environmental Program, financed with loans 774/OC-CO and 910/SF-CO and approved on 29 September 1993, preceded SINA II.

The program has the capacity to be a tool for structuring environmental investment expenditures made with ARC funds. The high priority that the Government of Colombia accords to the National Environmental System, the program components, and the mechanisms established in the Operating Regulations all ensure that program resources, including funds from the ARCs, will be allocated efficiently. On the one hand, the institution-strengthening component seeks to improve the environmental information system and, specifically, to produce basic environmental indicators for the ARCs to use.

On the other hand, the eligibility criteria for projects, the technical, environmental, and economic evaluation criteria for financing projects under the program, and the monitoring and evaluation criteria all seek to finance viable projects, to ensure a better allocation of resources.

3. Consolidating the achievements from SINA I

SINA II seeks to integrate the program into the Ministry of the Environment, Housing, and Land Development (MAVDT) and to more actively involve the ARCs and other stakeholders in the National Environmental System. The environmental investments component will continue to cofinance projects on issues that are a priority to the Government of Colombia, by structuring expenditures and leveraging resources.

Risks:

1. Institutional reforms

Risk: A bill to amend Law 99 is before Congress; it seeks primarily to curb political influence in the ARCs, by modifying their management structure. The bill, however, could be amended during passage.

Mitigants: The bill does not contain changes that would affect program implementation. Moreover, the risk related to potential changes in the law is mitigated because the ARCs' technical and planning functions that are necessary for program execution will continue to be carried out in accordance with the three-year action plans that the ARCs must develop based on technical proposals. If for any reason a provision were introduced into the bill that would change this assessment, the project team and the MAVDT have agreed that they would review it to decide on the steps that would be necessary for satisfactory program execution.

2. Fiscal constraints

Risk: The loan operation is not immune to possible budget cuts.

Mitigants: The lending policy adopted through the Consejo Nacional de Política Económica y Social [National Economic and Social Policy

Council] (CONPES) document stipulates that investment line items financed through external loan operations will have priority, which minimizes this risk. With regard to local counterpart funds, the contribution to the environmental investments component will come primarily from the ARCs, most of whose resources are own revenue established by law; that revenue is not contingent on the national budget. This makes that portion of the local counterpart contribution more secure. The risk regarding the local counterpart contribution for the institution-strengthening component is minimized through the provision that was adopted that gave priority in the Annual Cash Management Program to counterpart funding for loan operations.

3. Law and order

Risk: The law and order situation and the State's weak presence in large areas of the country create an environment in which it is difficult to execute and supervise projects. **Mitigants:** This situation is not new in Colombia, however the local participation mechanisms that the program will promote would mitigate this risk. In that regard, local communities are involved in formulating and executing the annual work plans and projects. Moreover, when the law and order situation so warrants, local supervision mechanisms will be commissioned.

Special contractual clauses:

The program executing agency must fulfill the following conditions precedent to the first disbursement of Bank loan proceeds:

- a. Appointment of the program coordinator (see paragraph 3.4);
- b. Entry into force of the Operating Regulations (see paragraph 3.10);
- c. Entry into force of the annual work plan for the first year of operation (see paragraph 3.12); and
- d. Approval by the CG of the MAVDT of the baseline data for goals for reforestation and watershed management that will reflect the program impact on the environmental situation (see paragraph 3.27)

Other special conditions:

- a. The condition requiring the entry into force of the agreement between the MAVDT and the Instituto de Hidrología, Meteorología y Estudios Ambientales [Colombian Institute of Hydrology, Meteorology, and Environmental Research] (IDEAM) (see paragraph 3.3) applies only to the first component.

- b. Within six months after signature of the contract, the MAVDT will submit to the Bank the indicative terms of reference for the ex post evaluation of SINA I (see paragraph 3.29)
- c. Within two years after signature of the contract, the MAVDT will hire consulting services to carry out the ex post evaluation of SINA I (see paragraph 3.29)

Poverty-targeting and social sector classification:

This operation does not qualify as a social equity-enhancing project, as described in the indicative targets mandated by the Bank's Eighth Replenishment (document AB-1704). Furthermore, this operation does not qualify as a poverty-targeted investment (PTI).

Exceptions to Bank policy:

None.

Procurement:

The thresholds for procuring goods and services and contracting works through international competitive bidding that are used for Colombia and that will be applied to this program are US\$350,000 and US\$5 million, respectively. No procurements that would exceed those limits are anticipated in this program. International competitive bidding will be used to engage consulting services costing over US\$200,000. Bidding under these thresholds will be carried out in accordance with national law, provided it does not contravene Bank procurement policy. An ex post evaluation will be conducted of contracting procedures and the substantiation of disbursements for procuring works, services, and consultancies that are bid out or competed for under the limits applicable for international competitive bidding. All contracting will use procedures acceptable to the Bank, as stipulated in Annexes B and C of the loan contract.

I. FRAME OF REFERENCE

A. Environmental situation

- 1.1 Colombia has a great wealth of natural resources that have the potential to be a key factor in the country's economic and social development. It has 64 million hectares of natural forest cover, which represents 47% the country's surface area. Moreover, 9% of that land is part of the “protected areas” system. Colombia ranks seventh in the world in terms of natural tropical forest cover and is home to 6.42% of tropical South America's and 1.5% of the world's forests.
- 1.2 Colombia has a broad array of ecosystems in its territory and is therefore considered to be megadiverse. Mainland Colombia is 1.14 million km,² (0.75% of the world's surface area), however it is home to nearly 10% of the world's biodiversity. It has the second highest number of plant species in its interior in the world.¹ The country's water resources are also significant. Average annual precipitation is 3,000 mm, which generates surface flow of 58 lt/sec/km²—three times the average for South America and six times the world average.
- 1.3 The country's natural capital is, however, being threatened in two ways. On the one hand, renewable natural resources are being challenged by problems of unsustainable use and, on the other, rapid urbanization is creating environmental quality issues that affect the population's well-being. As for the base of renewable natural resources, the transformation, fragmentation, and losses caused by anthropic activities are a direct cause of loss of biodiversity, soil degradation, and reduction of forest goods and services (water control, soil protection, water supply for human consumption and productive processes, etc.), which are important inputs for the local development of many communities. The animal population, which depends on forests for survival, is also being seriously affected, resulting in the isolation of some species and drops in population, which threatens the biological stability of the ecosystems.
- 1.4 Although there is no precise information on the different types of forest ecosystems in the forest reserves or on their conservation status, mangroves and Cativo, Sajal, and Guandal forests and other environmentally-important ecosystems are being threatened and are not being conserved or protected. Numerous forest species are also under great pressure because of selective utilization.
- 1.5 Another important factor affecting Colombia's forest heritage is deforestation stemming, *inter alia*, from settlement of land for colonization, indiscriminate slash-and-burn clearing, implementation of unsustainable agricultural activities, intensive use of firewood, and erosive processes. In addition, law and order issues and the establishment of illicit crops are increasing the fragmentation and loss of forest ecosystems. Some estimates point to annual deforestation of 200,000 to 600,000

¹ “World Resources 2002-2004: Decisions for the earth: Balance, voice and power” (2003). Publication by UNDP, UNEP, World Bank and World Resources Institute.

hectares. That corresponds to an annual rate of 0.4%, which is just below the rate for the region (0.5%).²

- 1.6 Water resources, in turn, suffer from time-space availability limitations, reducing potential usage and access. Although Colombia's water supply is considered abundant in absolute terms, several regions face relative scarcity, reflected in the inability to meet demand for water in terms of quantity and/or quality, particularly in the Andean region and along the Caribbean coast during the dry season. Furthermore, 84% of municipios in the country, representing 67% of the national population, have a water shortage risk level of average to very high in years with average hydroclimatic conditions.³ That risk jumps sharply in dry years, when an estimated 14 million inhabitants may experience water shortages. If current trends continue, in the year 2015, 66% of the population will be at high risk of water shortages during drought years.⁴
- 1.7 Inadequate land-use practices and urban development without environmental controls also have an adverse effect on the environmental setting. The country generates 27,000 tons of garbage daily, approximately 35% of which is produced in large cities, including Bogota with 6,000 tons per day. The main solid waste management problem is related to inadequate final disposal, institutional weakness, and a low level of technical sophistication. Only 110 municipios dispose of their waste in sanitary landfills, which means that over 900 (small and medium-sized) municipios use open-air dumps. Other practices used include burial, open-air disposal with uncontrolled burning, and direct discharge into bodies of water, all of which have major environmental and health implications.

B. Institutional and legal framework

- 1.8 In response to the degradation mentioned above, Colombia adopted a decentralized national environmental management system to address the environmental articles set forth in the Constitution. That document enshrines the protection of the nation's natural resources as one of its core principles and stipulates that all persons have the right to a healthy environment.
- 1.9 Law 99 of 1993 established the Ministry of the Environment (MMA) as the steering agency for environmental policy and management in Colombia. It also created the National Environmental System (SINA), which it defined as "all approaches, regulations, activities, resources, programs, and institutions for implementing the general environmental principles enshrined in this statute." The Ministry was also charged with coordinating the SINA, to ensure that environmental management in the country is implemented in a manner consistent with the environmental policies that are set. The SINA comprises: (i) the general principles and approaches contained in the Constitution and in Law 99 of 1993; (ii) environmental regulations; (iii) the State agencies responsible for environmental policy-making and action;

² The Little Green Data Book 2003. The World Bank (2003).

³ "Estudio Nacional del Agua," (2000), IDEAM publication, Bogota.

⁴ IDEAM. Perfil del Estado de los Recursos Naturales y del Medio Ambiente en Colombia [Profile of the Status of Natural Resources and the Environment in Colombia]. Bogota, (2001).

- (iv) community-based and nongovernmental organizations that deal with environmental issues; (v) economic sources and resources for environmental management and recovery; and (vi) State-owned, private, or semipublic institutions that produce data, conduct scientific research, and work on technological development related to the environment.
- 1.10 In February 2003, Resolution 216 gave the Ministry the following additional functions: policy-making on land use and urban management, water supply and basic sanitation, land and urban development, and housing policy, and its name was changed to the Ministry of the Environment, Housing, and Land Development (MAVDT). The MAVDT has two vice ministries: (i) environment; and (ii) housing and land development (for a more complete description of the MAVDT, please see section IV).
- 1.11 Implementation of environmental policy and environmental authority functions, as regards due enforcement of legal provisions, is tasked primarily to the Autonomous Regional Corporations (ARCs). Those ARCs that predated the law were reorganized, and new ones were also created for this same purpose. The ARCs are public corporations that have financial and administrative autonomy, own capital, and legal capacity. They have the following functions: (i) to execute national environmental policies, plans, and programs set forth in the law through which the Ministry approved or established the National Development Plan and the National Investment Plan, and to execute regional policies, plans, and programs entrusted to them under the law, within their jurisdiction; (ii) to serve as the highest environmental authority within their jurisdiction, in accordance with the superior norms and the criteria and guidelines established by the Ministry; and (iii) to promote and develop community participation in activities and programs for environmental protection, sustainable development, and proper management of renewable natural resources. In metropolitan areas that have a population of over one million, the law stipulates that the municipios will perform the environmental authority functions. To that end, those municipios have established Urban Environmental Authorities (UEAs) as part of their organizational structure (for a more complete description, please see Section IV).
- 1.12 Law 99 also organized the institutional architecture that provides information support for environmental management in Colombia. The law created or reorganized five research institutes on natural resources and the environment, under the authority of and linked to the Ministry.⁵ The law also laid the foundation for Colombia's National Environmental Information System (SIAC) to generate and supply the information needed for decision-making to the various public agencies and to the populace. The system distinguishes between those entities that both generate and use

⁵ They are the Instituto de Hidrología, Meteorología y Estudios Ambientales [Institute of Hydrology, Meteorology, and Environmental Studies] (IDEAM); the Instituto de Investigaciones Marinas y Costeras [Institute of Marine and Coastal Research] (INVEMAR); the Instituto de Investigación de Recursos Biológicos "Alexander Von Humboldt" [the Alexander Von Humboldt Research Institute on Biological Resources]; the Instituto Amazónico de Investigaciones Científicas [Amazonian Institute of Scientific Research] (SINCHI); and the Instituto de Investigaciones Ambientales del Pacífico [The Environmental Research Institute of the Pacific].

data and those that just use them. IDEAM has the primary responsibility for coordinating the system in accordance with MAVDT guidelines.

- 1.13 As part of the National Environmental System, Law 99 created financial instruments for environmental management. It established the National Environmental Fund (FONAM) as an account management system for the MMA (now the MAVDT); with legal capacity, independent capital, and no administrative structure or staff. FONAM resources are used to cofinance the environmental investment projects of different entities in the National Environmental System, to leverage national, regional, and local strategic environmental projects and initiatives. Those projects must be consistent with the guiding principles of national environmental policy. Special subaccounts can be created within FONAM, such as the one that was used for the Environmental Investments Fund (EIF) for the Bank-financed Environmental Program (SINA I).⁶
- 1.14 The law also creates own revenue for the ARCs and the municipios with UEAs, which makes SINA operations and investments sustainable. Sources of own revenue include a property tax surcharge or percentage, a transfer charge from the electricity sector, a water pollution tax or fine, and a water use fee. The first two have a clear financial objective and are the main source of revenue for the ARCs. The last two aim to send a message to economic agents, encouraging them to adopt more environmentally-friendly processes; in other words, they act more like economic instruments even though they have generated some significant revenue for the ARCs because of their redistributive effect.

C. Evaluation of SINA I

- 1.15 In order to help reverse natural resource degradation and strengthen the managerial capacity of the incipient environmental institutional framework, the Government of Colombia signed three loan operations with multilateral banks.
- 1.16 The aforementioned programs were executed through a common Coordinating Unit (CU) for both banks' programs, which facilitated their coordination. There were execution delays, cuts, and reallocations in implementing the programs (see table 1).⁷ In part, this was because the MMA—a new agency at the time—was tasked with executing these programs and, in part, because of fiscal constraints that affected the programs in 1999 and 2000. Many of the execution problems were overcome in the last two years, as explained below.

⁶ Loan contracts 774/OC-CO and 910/SF-CO approved on 29 September 1993.

⁷ Budget cuts, however, were not limited to environmental investments. From 1999 to 2000, in Colombia, US\$190 million in loans from multilateral agencies were canceled, in sectors including agriculture, urban development, and education. Source: National Planning Department. CONPES document, “Estrategia de endeudamiento con la banca multilateral y bilateral” [Strategy for borrowing from multilateral and bilateral banks], 4 June 2001.

Table 1
Multilateral bank operations
(in US\$ millions)

Operation	Year	Instit.	Total amount executed	Loan amount executed	Amount of counterpart funding executed
SINA I ⁽¹⁾	1994	IDB	101.9	60.4	41.5
Natural Resource Management Program (NRMP) ⁽²⁾	1994	IBRD	65.3	39	26.3
Institutional Strengthening for Urban Environmental Management (ISUEM) ⁽³⁾	1996	IBRD	40.0	20.0	20.0
<i>Total</i>			207.2	119.4	87.8

Notes:

- (1) Initial amounts: total (US\$134 million), loan (US\$81 million); counterpart (US\$54 million); cutback of US\$5 million in 2000; reallocation of US\$13.8 million for reconstruction of the coffee belt; cancellation of US\$1.5 million in March 2002
- (2) Cancellation of US\$15.38 million. Program operations closed in March 2001.
- (3) Reallocation of US\$5.7 million for reconstruction of the coffee belt. Program completed on 31 December 2002.

- 1.17 The Environmental Program (SINA I) financed by the IDB through two loans totaling US\$60.4 million contained three components: (i) renewable natural resource management; (ii) institution-strengthening; and (iii) environmental investments. The MMA and the Bank closely monitored execution of SINA I, and changes and adjustments were always duly made to deal with execution problems, within current fiscal constraints.

1. Technical evaluation

- 1.18 **Natural resource management:** Thanks to the microwatershed management component, there will be 70,218 hectares of sustainable land use in 1,336 microwatersheds in the country, particularly protective-productive forestation, which helps conserve water resources. This exceeds the initial target of 60,400 hectares during the life of SINA I. For reforestation, loan proceeds totaling US\$7.7 million were invested, leveraging US\$9.7 million, for total investment of US\$17.4 million. Moreover, 18,000 jobs were directly created in 601 municipios. Another outstanding achievement was the recovery of the Ciénaga Grande de Santa Marta, a coastal lagoon; thanks to hydraulic management works, the lagoon is returning to its natural environmental conditions. Management of the Los Nevados National Natural Park was also strengthened.
- 1.19 **Institution-strengthening:** SINA I illustrated how multilateral banks can help develop environmental management systems, which was a novel area in the early 1990s. Today Colombia has a decentralized, self-sustainable National Environmental System, geared towards reversing the trends of degradation; moreover, the System is self-sufficient, because it has own revenue. All the ARCs—the SINA executing agencies—are operating, albeit with varying degrees of efficiency. Specifically, program resources financed studies that made it possible to formulate several environmental policies, establish the regulations for Law 99, develop environmental

research programs, and coordinate planning activities among the various institutions. Program resources also provided information technology tools for SINA institutions.

- 1.20 In terms of environmental information, IDEAM has generated and published a baseline on the status of natural resources, which was partially financed by SINA I, that will be used to implement SINA II and to evaluate both SINA I and SINA II. In addition, participatory schemes were created and strengthened in communities, nongovernmental organizations (NGOs), and regional institutions, as well as consultation and consensus-building mechanisms that have been very useful. The participatory mechanism helped to raise local funds and funds from the ARCs for projects of regional interest. For example, the Collective Environmental Project, as the government's environmental program was called from 1998 to 2002, and the Green Plan, which was the name of the microwatershed management subcomponent of SINA I, were both the result of consensus among stakeholders in the National Environmental System.
- 1.21 SINA institutions were also strengthened through the training of 1,939 professionals. Nearly 3,000 rural extension workers in 445 municipios also received training. That activity was accompanied by 544 participatory community projects. Regarding environmental education for children, 1,360 teachers were trained, benefiting 277,000 pupils, and educational materials were produced. This has boosted environmental awareness in the school community.
- 1.22 **Regional environmental investment:** From 1995 to 2003, the Environmental Investments Fund (EIF), using proceeds from SINA I, cofinanced 121 projects totaling US\$22.4 million, of which 61.8% was from program proceeds and 38.2% was the beneficiary institutions' counterpart contribution, with an upward trend (from 1999 to 2002 the amount financed rose by an average of 55%). Demand from projects has mushroomed and exceeds the current supply of resources. Demand is expected to continue to grow, since all the ARCs have approved management plans and own resources established by law that will be used as local counterpart funding.
- 1.23 Generally speaking, the objectives set forth in the loan contracts have been met.⁸ The technical foundation has been laid for adequate environmental management in the region, and the institutional capacity is in place for formulating and implementing environmental policies.

2. Institutional evaluation

- 1.24 Both the MAVDT and the findings from the Universidad Javeriana evaluation of execution of the Environmental Program⁹ recommend that the organizational structure used to manage and administer execution of SINA I be modified for SINA II, particularly because the Coordinating Unit (CU) for SINA I was not sufficiently integrated into the Ministry.

⁸ The final version of the project completion report (PCR) rates project implementation as "satisfactory."

⁹ Study financed by the Bank (Sustainable Development Department) to evaluate institutional reforms in the area of the environment in several countries of the region.

- 1.25 Analysis by the Bank and the MAVDT identified the following main execution problems in SINA I: (i) extensive paperwork, in general, and problems with fulfillment of the conditions precedent to first disbursement, in particular; (ii) the annual work plans (AWPs) for SINA I were not properly coordinated with SINA institutions; (iii) in the first years of execution, no action plans had been agreed on at the institutional level by the Ministry; (iv) initial technical coordination of program execution was inadequate because there was no institutional framework; (v) problems with the availability of resources, due to fiscal constraints in the country and to formulation errors in the Budget Law that affected execution for a specific fiscal year; and (vi) the CU was physically and operationally isolated during the first two years of program execution.
- 1.26 With respect to the foregoing difficulties, it should be noted that the institutional structure of SINA I was very appropriate for that time, because the Ministry did not exist. Later, while the Ministry was being consolidated, the CU was able to efficiently meet the challenges posed by execution of SINA I.

D. Evolution from SINA I to the proposed program and lessons learned

- 1.27 SINA I met its objective of creating the National Environmental System and making it operational. Many of the institutional problems described above arose because the System was in the early stages of organization. SINA I was first executed by the National Planning Department (DNP). Only when the legal framework was established creating the MMA and the ARCs were reorganized was SINA I moved to the Ministry, and many of the problems detected were resolved. The institutional transition of the program and, specifically, of the functions of the CU for SINA I and SINA II dealt adequately with the situation during each stage of the System. Execution of SINA II will fall under the purview of the MAVDT and will actively involve the ARCs, particularly in preparing the annual work plans (AWPs).
- 1.28 SINA II seeks to consolidate the institutional reforms begun under SINA I, by strengthening the institutions in the National Environmental System. SINA I made progress on a wide range of topics that require further action. The production of information that began under SINA I must lead to an integrated information system that is useful for all entities in the National Environmental System, which SINA II will make operational. The policy-making activities financed under SINA I will continue under SINA II, with actions to implement a select group of three policies. Based on the training experience gained during SINA I, the proposed program would lay the foundation for ongoing training. SINA I financed the crafting of management plans for the ARCs, and those plans need to be coordinated with one another and implemented.¹⁰
- 1.29 The environmental investments component will continue to cofinance projects in the Government of Colombia's priority areas. IDB resources actually committed for SINA I totaled US\$60 million and World Bank program resources amounted to US\$37.9 million, for a total of US\$97.9 million. The proposed program would

¹⁰ The planning system developed with SINA I resources is based on three tools: the ten-year regional environmental management plans, the three-year action plans, and the annual work plans.

provide US\$20 million in financing, which suggests that execution of SINA II would be efficient.

- 1.30 The drop in external financing for the National Environmental System is due primarily to: (i) the degree of development the System has achieved since it was first launched; (ii) the external debt limits set by the Government of Colombia; and (iii) the availability of additional resources from the ARCs, which are providing more funding than during execution of SINA I. The Government of Colombia continues to accord priority to strengthening the National Environmental System, based on the environmental problems detected and the objectives set. Overall, however, total investment in Colombia's environmental sector has grown significantly in recent years.
- 1.31 The problems experienced and lessons learned from SINA I have made it possible to design SINA II with a view to making it more efficient administratively and technically. From an institutional standpoint, SINA II aims to streamline procedures for processing operations, integrate execution of the proposed program with the technical and planning divisions of the MAVDT and the ARCs, both for project preparation and for execution and evaluation. The program CU will focus on administrative and financial issues, leaving the technical functions primarily to the technical and planning divisions at the MAVDT. This implementation set-up will facilitate effective transition to a decentralized execution system. The financial mechanism used in SINA I—the EIF—proved effective in leveraging resources from the regions, and particularly from the ARCs, and organized expenditures on environmental projects according to national and regional priorities and to the Operating Regulations, thereby improving the allocation of SINA resources. The EIF will be used in SINA II as well.

E. Program design and Bank strategy in the sector

- 1.32 In the area of environmental management, the Government of Colombia aims to strengthen the National Environmental System, for which it must sustain the progress already made. To that end, the proposed program is being presented to support the achievement of national environmental policy objectives. The MAVDT has gained valuable administrative and operating experience and has increased and enhanced capacity to execute new operations. Colombia now has a sound institutional apparatus with specialized human resources. In this context, execution of initiatives must be continued at the national level and strategic investment projects at the regional and local levels, particularly in pursuit of participatory, consensus-based solutions that would counteract the degradation of Colombia's natural resources.
- 1.33 The proposed program is consistent with Bank guidelines for supporting development in Colombia. The Bank's strategy with Colombia (document GN-2267-1), approved in September 2003, mentions as a priority focus laying the foundations for economic revival, including support for natural resources management. This operation is fully consistent with that objective, since it would consolidate an environmental management system geared towards the conservation

and sustainable use of natural resources and the environment.¹¹ In particular, this program responds to the challenges created by the degradation of microwatersheds and deforestation, which are limiting the country's development. Both this program and SINA I provide strategic support in those areas, which are part of the Bank's agenda for supporting this sector. Recent studies have proven the merits of working with projects like the ones that will be financed by the Environmental Investments Fund (EIF) in this program.¹²

- 1.34 In addition, the program supplements the MIF-financed technical-cooperation project entitled "Environmental Management and Implementation of Cleaner Technologies for Colombian Enterprises" (ATN/MH-7269-CO), the purpose of which is to help improve the competitiveness of small and medium-sized enterprises (SMEs) through cleaner production processes.

F. Coordination with other multilateral agencies

- 1.35 The World Bank has two operations in its pipeline for the environmental sector: one technical assistance loan (TAL) for approximately US\$5 million and one structural adjustment loan (SAL) for the environment sector totaling US\$100 million. The objective of the SAL is to mainstream environmental and sector considerations in the transport, energy, housing, and water sectors. The objective of the TAL is to support the coordination of activities to implement the SAL. The IDB and World Bank programs complement one another, since they work on different areas of environmental management, but within a framework of policy conditions that is consistent with SINA II activities. While the IDB's proposed program is aimed at financing the environmental investments of the ARCs for natural resources management, the World Bank program focuses on environmental institutional activities in several sectors of economic activity.¹³ The complementarity between the activities of the proposed program and the World Bank programs was reviewed at working meetings, which the MAVDT attended, and active dialogue is ongoing regarding drafting of the preparatory studies for the TAL. The IDB has had the opportunity to comment on the terms of reference, and there are plans to review documents together. The project team has been working closely with the World Bank team that is preparing the TAL and the SAL, and the last orientation mission was even carried out jointly with the World Bank.
- 1.36 In addition, the MAVDT is executing a nonreimbursable technical-cooperation program with financing from the Government of Holland. The first phase, which lasted 19 months and involved approximately US\$3 million, is about to end, and the start of the second phase is being negotiated and would involve nearly US\$7 million

¹¹ The strategy paper (GN-2267-2) indicates US\$25 million in lending, which was reduced to US\$20 million (a 20% change).

¹² Medio Ambiente y Desarrollo Económico: Priorización de la Inversión Ambiental con Criterios Económicos [Environment and Economic Development: Using Economic Criteria to Prioritize Environmental Investment]. Ibañez, A.M. and E. Uribe. Fedesarrollo, Bogota, December 2002. (Study commissioned by the IDB)

¹³ This complementarity was described in the Bank's strategy with Colombia (document GN-2267-1), approved in September 2003.

over three years. That program seeks to strengthen the planning and decentralization processes, which would complement the institution-strengthening component of the IDB's proposed program.

II. THE PROGRAM

A. Objective

- 2.1 The program's objective is to help improve the status of natural resources and the environment, to promote sustainable development in Colombia and improve environmental management by SINA agencies. To that end, the following steps must be taken: (i) enhance environmental awareness and improve SINA in terms of the formulation, implementation, and monitoring of environmental policies and strategies for environmental management; and (ii) carry out investment projects and programs for recovery, conservation, protection, management, use, and development of renewable natural resources and the environment through a participatory, consensus-based approach.
- 2.2 To achieve the foregoing, the program seeks to: (i) promote the knowledge and specialized information generated by SINA institutions for decision-making; (ii) move ahead with implementing and coordinating environmental policies, developing the necessary instruments in the context of decentralization and participation of various stakeholders in environmental issues; (iii) promote and implement programs for education, dissemination, and awareness-raising at the sector, national, subnational, and local levels that improve national, regional, and local planning processes; and (iv) cofinance environmental investments with support from regional and local agencies and SINA institutions that are consistent with the priorities established in the National Development Plan and national environmental policy.

B. Description

- 2.3 To achieve the foregoing, the program would implement two components: (i) institution-strengthening to consolidate the SINA; and (ii) financing environmental investments (see Annex II, "Logical Framework").
- 2.4 Component I seeks to support and strengthen SINA environmental institutions, so they can better fulfill their environmental policy implementation and improve management processes in those agencies. It consists of the following subcomponents: (i) develop the system for specialized environmental information generated by SINA institutions, to be used as the basis for decision-making and performance evaluation; (ii) implement and link environmental policies and their instruments in the context of decentralization and participation in connection with the issues of forest ecosystems in watershed, cleaner production, and solid waste management; (iii) promote and implement education and training programs on the importance of conserving and managing natural resources and the environment; and (iv) provide technological support for the MAVDT.
- 2.5 Component II would cofinance priority environmental projects that are in line with national environmental policy. Those projects would be proposed by regional or local initiatives and would have regional and national benefits; and their environmental, social, and economic impact would justify funding by the national

government. The component would leverage investments through the FONAM, through the Environmental Investments Fund (EIF) account, which would finance projects that meet the eligibility criteria set forth in the program Operating Regulations.

- 2.6 The Government of Colombia has established three priority areas for component II: (i) conservation, restoration, and sustainable management of forest ecosystems in watersheds; (ii) comprehensive solid waste management; and (iii) cleaner production. Priorities are set in accordance with the rapid urbanization process, which has undesirable environmental consequences on quality of life, and with interest in leveraging the environmental and social benefits of sound management of the country's endowment of natural resources.

1. Component I: Institution-strengthening to consolidate the SINA (US\$3.05 million)

- 2.7 The following is a description of the content of each subcomponent in Component I.

a. Environmental information systems

- 2.8 Colombia's existing Environmental Information System (SIAC) will be upgraded in its water and forest modules. The subcomponent consists of the following areas of activity: (i) design and implementation of a water and forest monitoring and oversight program, to be carried out through the main indicators in the environmental baseline data and the indicators for monitoring an evaluation of ARC performance in those areas; (ii) design of environmental management indicators for decision-making purposes; and (iii) provision of the appropriate infrastructure for operating the system (support, connectivity, hardware, software, etc.). Central information hubs will be located in the IDEAM, the MAVDT, and other agencies, based on the specific subject.

b. Implementation of environmental policies

- 2.9 Implementation efforts will focus on a select group of environmental policies culled from among the numerous ones that exist for different issues and sectors. This move is intended to boost efficiency in the allocation of resources. The program will operate under the National Forest Development Plan in its environmental components and the policies on comprehensive solid waste management and cleaner technology. These are the areas covered in the environmental investments component. This subcomponent will finance advisory activities, technical assistance and transfer of experience, regulatory development, and development of the instruments in each of these policies or plans.

c. Environmental awareness-raising and education

- 2.10 To raise awareness of the importance of conservation and sustainable management of natural resources and the environment, and the environmental policies established by the ministry, financing will be provided for agreements, workshops, seminars, teleconferences, use of the media, brochures, guides, videos, and meetings. The training activities target SINA agency officials under the MAVDT training plan.

d. Technological support for the MAVDT

- 2.11 Financing will be provided to procure computers, printers, plotters, scanners, servers, active network hardware, software, and photocopiers, as technological support for improving MAVDT operations and management.

2. Component II: Financing environmental investments (US\$22.74 million)

- 2.12 The environmental investments component will finance the following types of projects:¹⁴

a. Conservation, restoration, and sustainable management of forest ecosystems in watersheds

- 2.13 Projects will be financed for degraded strategic ecosystems by establishing and restoring protective and productive-protective forests, hedges or living fences, natural succession (stubble fields) and agroforest systems, to contribute to the supply of water resources.

b. Cleaner production

- 2.14 Pilot and preinvestment projects that promote improved environmental management will be cofinanced, under the national policy on cleaner production, with the participation and linkage of the Regional Network of Hubs or other organizations or regional initiatives for cleaner production (hubs, windows, training programs, and technical assistance) that will help improve environmental management associated with improved productivity and business competitiveness and implement good environmental practices in micro, small and medium-sized enterprises. The strategic lines of action will be geared towards the promotion and strengthening of business association capacity, improving business competitiveness that will lead to the generation of environmental benefits, environmental awareness of issues concerning conservation and efficient use of water and energy, improvements in production processes, technological re-engineering, use of cleaner fuels, saving and substitution with less polluting raw materials and inputs, monitoring and oversight of economic and environmental benefits and consolidation of byproduct utilization chains and, in general, implementation of environmental management systems that increase industrial output in the framework of sustainable development. The pilot projects must include the resources necessary for evaluation of their performance and results.

c. Comprehensive solid waste management

- 2.15 Financing will be provided for technical-cooperation and technical-assistance projects for regional or local planning and for strengthening comprehensive management of solid urban, industrial, hospital, and hazardous waste, as well as for solid waste utilization and beneficiation. The strategic lines of action for this

¹⁴ The priority issues for financing with program resources and the draft Operating Regulations and annual work plans for the first year were coordinated with representatives of the subexecuting agencies. Although the fund operates based on demand, it is estimated that over 80% of it will be used for the first category (conservation, recovery, and management of forest ecosystems).

component will be geared towards designing and investing in pilot solid waste utilization and beneficiation projects; consolidating and strengthening solid waste management and transformation chains; dissemination and training for comprehensive management; designing, validating, and applying technical, economic, and regulatory solid waste instruments; developing strategies for promoting utilization of organic and inorganic waste; and laying the technical foundation underpinning sector regulations. The pilot projects must include the resources necessary to implement monitoring and oversight systems.

- 2.16 The administration category contains resources for financing expenditures for program execution. The local counterpart contribution will be composed of staff and goods and services to be contributed by the MAVDT for program execution. Financing will also be provided for national and international consulting services; national travel and per diem; meetings for planning workshops to prepare the AWP. This component does not include salaries for MAVDT staff, except for the staff assigned to the program, and will be financed with local counterpart funds. The evaluation and audit category includes expenditures outside of the Financial Planning and Multilateral Bank Program Group (GPFBM) to finance external audits, the midterm and final evaluations of SINA II, and the ex post evaluation of SINA I.

C. Cost and financing

- 2.17 The total cost of the program is US\$28.6 million, of which the Bank will finance US\$20 million (70%). The local counterpart contribution will be US\$8.6 million (30%); over 75% of that will come from the program subexecuting agencies, and the remainder from the central government budget earmarked for the MAVDT. The cost table is provided below.
- 2.18 The capacity of the ARCs to provide this support is guaranteed through the Operating Regulations, which require proof of the availability of funds as part of the viability assessment for the projects presented. As Chapter IV, Section B indicates, the ARCs have significant own resources for environmental investments. Moreover, the Operating Regulations stipulate that for projects under the environmental investment subcomponent, contributions from the beneficiaries can range from a minimum of 30% to a maximum of 70% per project. Overall, the cumulative beneficiary contribution must be at least equal to the contribution made from the loan proceeds. For purposes of the financing matrix, the minimum contribution requested from the ARCs was used. This means that it is feasible to expect an effective local counterpart contribution by program completion that is higher than the amount established in the financing matrix, as occurred during execution of SINA I.
- 2.19 Bank financing for the program will be from Ordinary Capital (OC), using the Single Currency Facility in U.S. dollars, with a term of 25 years, and a variable interest rate. The grace period will be four years; the credit fee on unused balances is 0.25%; and the inspection and supervision fee will be 0%. The interest rate, credit fee, and inspection and supervision fee mentioned in this document are established pursuant to document FN-568-3 Rev. and may be changed by the Board of Executive Directors, taking into account the available background information, as well as the respective Finance Department recommendation. In no case will the credit fee

exceed 0.75%, or the inspection and supervision fee exceed 1% of the loan amount.¹⁵ Loan interest during the disbursement period will not be financed with program resources and will be paid off with funds from the National Treasury.

Table 2
Total cost and financing
(in thousands of us dollars)

Component/subject area	IDB	Local	Total	%
I. Administration	384	1,218	1,602	6
(1) Coordinating Unit (CU)	384	0	384	2
(2) Staff at the MAVDT and other agencies	0	1,218	1,218	4
II. Components	18,996	7,354	26,350	92
1) Institution-strengthening	1,200	242	1,442	5
(a) Environmental Information System	700	49	749	3
(b) Environmental policies, training, dissemination, and technical support	500	193	693	2
2) Environmental investments	17,796	7,112	24,908	87
III. External audit and evaluation	420	0	420	1
IV. Unallocated (contingencies)	200	28	228	1
V. Financial costs*	0	0	0	0
1) Interest	0	0	0	0
2) Credit fee (0.25%)	0	0	0	0
3) Supervision fee (0%)	0	0	0	0
Total	20,000	8,600	28,600	100
Percentage	70	30	100	

* The GOC will cover the payment of interest during program execution, the credit fee, and the supervision fee. The financing will not be drawn on program resources.

¹⁵ With regard to the inspection and supervision fee, in no case will the charge exceed, in a given six-month period, the amount that would result from applying 1% to the loan amount, divided by the number of six-month periods included in the original disbursement period.

III. PROGRAM IMPLEMENTATION

A. Borrower and executing agency

- 3.1 The borrower will be the Republic of Colombia. The program executing agency will be the MAVDT, which has two vice ministries: (i) environment; and (ii) housing and land development.

B. Program execution and administration

- 3.2 The top program authority is the Cabinet Council (CC), which is composed of MAVDT executives. The CC is chaired by the Minister of the Environment, Housing, and Land Development and is responsible for ensuring that program execution complies with national policies and with the agreements reached with the Bank. The CC also establishes policy guidelines, resolves interagency conflicts, approves the annual work plans, and verifies progress made in executing the plans and devising solutions, when necessary. The CC will meet at least twice a year.
- 3.3 Under the MAVDT, the GPFBM reports to the minister. It administers program execution and ensures fulfillment of the agreements reached with the Bank.¹⁶ The subexecuting agencies for the environmental investments component are the Autonomous Regional Corporations (ARCs) and the cities that have Urban Environmental Authorities (UEAs). The subexecuting units may partner with each other and with subnational institutions, including indigenous reserves, Afro-descendant communities, and other public and private institutions with environmental competencies, such as ministries, universities, and NGOs. For the environmental information subcomponent, IDEAM will act as subexecuting agency through an agreement it will sign with the MAVDT.¹⁷ **The effective exercise of that agreement is a condition precedent to the first disbursement of loan proceeds for Component I.** Moreover, the subexecuting agencies, through agreements with the MAVDT, will be responsible for adequately executing the investment projects financed by the program or ensuring they are adequately implemented; to that end, it will follow the guidelines set forth in the Operating Regulations.
- 3.4 The Vice Minister of the Environment will be the general program coordinator. **The appointment of the general coordinator for the program is a condition precedent to the first disbursement.** To discharge his functions as coordinator, the Vice Minister will be assisted by a team of four professionals from different specialties, one of whom will act as Manager of the GPFBM on behalf of the Vice Minister. The team will also have two accounting assistants and two professionals for technical and administrative duties. The project team reviewed the terms of reference for those professionals.

¹⁶ The purpose of the GPFBM is to direct, oversee, and carry out all the technical and administrative steps necessary to carry out all the MAVDT external credit programs.

¹⁷ The Bank's project team reviewed the draft agreement between the MAVDT and the IDEAM and found it adequate.

- 3.5 The GPFBM will have the following responsibilities: (i) fulfillment of the terms of the loan contract; (ii) supporting the establishment of program bank accounts and financial management systems; (iii) planning and monitoring execution; (iv) managing disbursements of loan proceeds and counterpart funds; (v) accountability to the Bank; (vi) coordinating procurement of goods and the awarding of contracts for works and services; and (vii) coordinating the processing of contracts, agreements with the subexecuting agencies, and authorization of payments for contractors. It will also be responsible for supporting program audits and preparing periodic reports both for the Bank and the corresponding national authorities, based on the program monitoring and evaluation performance reports that the technical divisions of the Office of the Vice Minister for the Environment will submit to it.
- 3.6 It will carry out most of the aforementioned activities by supporting or coordinating with the different units of the MAVDT, for which the GPFBM team will maintain operational ties with the General Secretariat, the Legal Office, and the technical and planning divisions and other supporting units of the MAVDT.
- 3.7 The MAVDT has a Forest Management Group (GCF) that reports to the Vice Minister for the Environment and is responsible for the design, orientation, and technical and environmental evaluation of the activities to implement the commitments undertaken under the program for forest conservation, recovery, and sustainable management. The CGF will provide support for the preparation and execution of instruments and strategies for implementation by the coexecuting agencies, in order to guarantee the resources requested and allocated are consistent with previously established national policies and regional plans and programs.
- 3.8 The General Secretariat, with support from the Legal Office of the MAVDT, will be responsible for preparing the contracts and agreements with the subexecuting agencies and for carrying out the bidding processes for procurements and contracting in the program's institution-strengthening component (see Annex III, "Tentative procurement table"). The General Secretariat (Finance and Budget Group), in coordination with the GPFBM, will be responsible for the accounting and financial management of the program. The technical divisions of the Vice Ministry of the Environment will be in charge of: (i) evaluating environment project proposals; (ii) lending technical support to make adjustments to the projects presented; (iii) conducting technical monitoring of execution of contracts and agreements by the subexecuting agencies; and (iv) verifying fulfillment of the contracts and agreements, so that the subexecuting agencies and/or contractors are paid. The planning, information, and regional coordination division will be in charge of ensuring that the program is carried out in the framework of the MAVDT action plan and indicative plan and the goals established in the National Development Plan.
- 3.9 The following staffing will be required for proper program implementation, in addition to the GPFBM staff: two professionals in the General Secretariat, one professional in the Legal Office, and eight professionals in the technical and planning divisions.

C. Operating Regulations

- 3.10 The project team and the MAVDT have worked out the draft Operating Regulations for the proposed program, which were prepared based on those from SINA I, adapting them to the institutional set-up, decentralization, environmental priorities, and the lessons learned during execution of that project. The Operating Regulations detail the program execution mechanisms; establish the corresponding responsibilities of the Ministry, the GPFBM, and the subexecuting agencies; set forth general and specific eligibility criteria for projects, in accordance with the different subject areas, and for subexecuting agencies and systems; and establishes evaluation, tracking, and monitoring instruments. The project team reviewed the draft Operating Regulations and made comments thereon while the operation was being processed. Those comments were incorporated, and the project team finds the Operating Regulations to be satisfactory for executing the operation. **The entry into force of the Operating Regulations is a condition precedent to the first disbursement of the loan.**

1. Project cycle

- 3.11 The financing cycle for environmental investment and institution-strengthening projects begins with the preparation of the annual work plan (AWP), which is to provide for a high level of participation by the subexecuting agencies; appropriate consultations are undertaken with other actors in the National Environmental System as well. For each fiscal year, the GPFBM, with support from the MAVDT's planning, information, and regional coordination division, will organize an AWP-preparation workshop for the GPFBM, the MAVDT, and the subexecuting agencies. The workshops will be funded with program resources, and they will be run by a facilitator who is an expert in planning and executing AWP's with participatory approaches. Once the AWP is prepared, it will be sent to the CC and the Bank for their respective approval and no objection.
- 3.12 The AWP sets priorities, to serve as a framework for the projects that will be financed with program resources during the fiscal year, establishes targets that it will aim to meet in each subject area, stipulates how that will be done, and provides incentives for doing so. The draft AWP I has been reviewed, and the MAVDT is making the changes agreed on with the project team, which will make the plan suitable for carrying out the first year of project activities. **The entry into force of the AWP I is a condition precedent to the first disbursement of the loan. The AWP I and the Operating Regulations have to be approved by the corresponding bodies in the MAVDT, once the Bank approves the loan operation.**
- 3.13 The operating mechanism begins with the subexecuting agencies presenting projects to the MAVDT, which reviews them according to the eligibility parameters in the Operating Regulations.¹⁸ Eligible projects are examined by the technical divisions of the Office of the Vice Minister for the Environment, which, based on a comprehensive evaluation, issue an opinion on the technical, institutional, and financial feasibility of the project. Feasible projects are presented to the

¹⁸ In the case of the institution-strengthening component, the initiatives begin in the MAVDT.

Environmental Investments Committee for consideration and approval of financing. The Investment Committee is chaired by the Vice Minister of the Environment and is made up of representatives of the central government, the ARCs, and research institutes. Civil society and subnational agencies will participate in it when deemed appropriate.

- 3.14 Once the project or services are approved, the GPFBM will arrange for the first disbursement of FONAM-EIF funds. Disbursements will be made according to an investment plan, including the contribution from the subexecuting agency, against expense vouchers authenticated by the project supervisor. The subexecuting agencies are responsible for maintaining separate accounts for each project.

2. Eligible institutions

- 3.15 Even when institutions have been deemed eligible in principle, an institutional and financial assessment will be performed in the context of each project, to establish that the requestor (subexecuting agency): (i) has sufficient, proven, relevant experience; (ii) has sufficient trained staff to head up and execute the project; (iii) has the counterpart funds for the projects; (iv) has not previously breached its obligations to the FONAM-EIF; (v) is not involved in pending proceedings that could weaken its institutional and financial base for executing the project; and (vi) has a maintenance and operating program that guarantees project sustainability.

3. Eligible projects

- 3.16 Projects related to the following subject areas and that meet the requirements and criteria set forth in the Operating Regulations will be eligible. The subject areas that reflect the Government of Colombia's priorities are as follows: (i) conservation, restoration, and sustainable management of forest ecosystems in watersheds; (ii) comprehensive solid waste management; and (iii) cleaner production. Priorities are set in accordance with the rapid urbanization process, which is having undesirable consequences on the population's quality of life, and with interest in leveraging the environmental and social benefits of sound management of the country's endowment of natural resources.

4. Evaluation criteria

- 3.17 The general environmental evaluation criteria for projects include the (i) preinvestment and investment criteria set forth in the environmental policies on achieving conservation, recovery, protection, awareness, and use of natural resources and improving the environment; (ii) projects are also evaluated based on whether they are self-sustainable over time; (iii) involve more than one institution in their execution; (iv) guarantee that real measurable results are generated; and (v) meet the specific criteria set forth in the Operating Regulations.
- 3.18 The technical evaluation will be driven by the following criteria: (i) that the objectives are backed by the country's environmental policies; (ii) that the objectives and planned project activities are reasonable and are duly applicable, including verification that the design parameters have technical substantiation;

(iii) that viable technologies are used; (iv) that project execution does not involve excessive technical risks that would jeopardize the ability to meet project objectives; (v) that the projects do not have adverse impacts or that they have acceptable mitigation measures; and (vi) that the costs are within the normal limits in the country for similar activities.

- 3.19 The projects will be discussed based on the following criteria: a feasibility analysis tailored to the methodologies developed by the DNP's project bank for environmental projects. The analysis was based on examination of the information provided with regard to the environmental data (impact on natural resources), socioeconomic data (productive activities), institutional information and information on participation by civil society, and financial data. In addition, the projects will undergo a least-cost analysis, and those whose total cost will exceed US\$300,000, where deemed appropriate, will undergo a cost-benefit analysis; and only those projects with an economic internal rate of return (EIRR) of over 12% will be financed. For forest and watershed projects, financing using loan proceeds cannot exceed US\$550 per hectare.
- 3.20 For the social evaluation, the Operating Regulations prioritize projects that have the most civil society participation, particularly by minority groups, including evidence of community involvement in identifying solution alternatives and building consensus on actions during all phases of the project.

5. Other specifications

- 3.21 Loan proceeds will be transferred in local currency and will be nonreimbursable. Up to 50% of the total cost of a given conservation and sustainable management of microwatersheds and forests project will be financed. Cleaner production and solid waste management projects can receive up to 70% financing. The environmental investments component of the program will seek an average gearing ratio of no less than 1:1. Program financing cannot exceed US\$1 million per project. Financing in this operation is nonreimbursable because the benefits of the investments will not go exclusively to the ARCs, but rather to the regions in which the projects are being implemented and to the nation as a whole.

6. Project supervision

- 3.22 The contract or agreement supervisors must ensure complete fulfillment of commitments, report to the MAVDT through the GPFBM on project progress, provide timely warning of implementation difficulties, and propose options for resolving those problems. Technical visits will be conducted, as appropriate and needed. The supervision cost for environmental projects will be part of the total project cost and can be financed with program resources. The MAVDT will take steps to ensure proper use of the resources, including suspension of disbursements of program resources to the executing agencies. The Bank will give its ex ante no objection to projects that cost over US\$750,000. In all other cases, the Bank will supervise projects through ex post sampling.

D. Procurement of goods and services

- 3.23 The thresholds for procuring goods and services and contracting works through international competitive bidding that are used for Colombia and that will be applied to this program are US\$350,000 and US\$5 million, respectively. No procurements that would exceed those limits are anticipated in this program. International competitive bidding will be used to engage consulting services costing over US\$200,000. Bidding under these thresholds will be carried out in accordance with national law, provided it does not contravene Bank procurement policy. Based on the experience with SINA I, the project team reviewed the MADVT's capacity to manage procurement and disbursements, which it deemed satisfactory. Taking into account this assessment, it was agreed that an ex post evaluation will be conducted of contracting procedures and the substantiation of disbursements for procuring works, services, and consultancies that are bid out or competed for under the limits applicable for international competitive bidding. All contracting will use procedures acceptable to the Bank, as stipulated in Annexes B and C of the loan contract.

E. Execution period and disbursement schedule

- 3.24 Program resources will be disbursed over a period of four years, starting on the effective date of the loan contract. The term for disbursement of the total amount of the loan proceeds may be no less than three years after the effective date of the loan contract. The implementation schedule was projected based on the capacity of the executing agencies and experience from implementing the previous loan operation.

Table 3:
Disbursement schedule by source of financing
(In thousands of U.S. dollars)

Source of financing	Year 1	Year 2	Year 3	Year 4	Total	%
A) IDB	2,619	6,175	5,604	5,602	20,000	69.9%
B) Local counterpart	1,553	2,443	2,325	2,279	8,600	30.1%
Total	4,172	8,618	7,929	7,881	28,600	100.0%
Percentage	14.6%	30.1%	27.7%	27.6%	100.0%	

F. Advances

- 3.25 Due to the nature of the program and the expenditures it entails, a revolving fund will be established with up to 20% of the loan amount for program disbursements. The foregoing is recommended jointly with the Country Office. The establishment of a revolving fund with up to 20% of the loan amount is justified because of the decentralized execution of the Environmental Investments Fund (EIF), with multiple subexecuting agencies, and the large number of projects being executed simultaneously. This process will begin with the transfer of the resources from the

MAVDT to the subexecuting agencies, and will continue with the transfer from the subexecuting agencies to each of the projects, at which point execution per se will begin. Once the projects have been carried out, the documentation justifying expenditures and investments will be compiled by the subexecuting agencies (ARCs and UEAs), for submittal to the MAVDT, and ultimately to the Bank. The cycle of “advance funds – decentralized execution nationwide – justification of expenditures” will take an estimated nine months to one year, depending on the magnitude of the projects to be executed. Since approximately 25% of the program can be expected to be executed each year, given the long cycle involved, a revolving fund of up to 20% of the loan amount is necessary in order to avoid any shortage of liquidity for the program and a consequent temporary paralysis due to lack of funds. Semiannual progress reports on the status of the revolving fund must be submitted within 60 days after the end of each six-month period. The Country Office will closely monitor use of the revolving fund requested and may reduce its amount if warranted in the case of unsatisfactory execution.

G. Retroactive recognition of expenditures and financing

- 3.26 As part of the local counterpart contribution the Bank can recognize expenditures made within 18 months prior to the Board's approval of the operation, up to the equivalent of US\$1 million, in accordance with the eligible program categories and Bank procedures. In addition, with the Bank's acceptance, up to the equivalent of US\$1 million of the loan proceeds can be used to reimburse eligible expenditures made on program activities or preparation, as of that date. The Bank's Country Office will verify the eligibility of the expenditures made.

H. Monitoring and evaluation

- 3.27 **Internal monitoring:** The MAVDT, in coordination with the GPFBM, will evaluate administrative, technical, and financial aspects of program development and execution. The technical divisions, in turn, will periodically issue a consolidated technical report on the progress of the projects and will submit it to the GPFBM for the relevant purposes. The subexecuting agencies must give financial and technical reports on program execution and progress, as stipulated in their respective agreements or contracts and must identify execution problems and propose solutions to fulfill the purpose of the project. Baseline data were established for the goals in the reforestation and watershed management that will reflect program impact on the environmental situation. The project team reviewed the baseline data and found it to be adequate. According to MAVDT guidelines, the baseline data must be approved by the CC. **Approval of the baseline data by the CC will be a condition precedent to the first disbursement.**
- 3.28 **External monitoring:** The program will have funds for independent midterm and final evaluations, to be performed by an external consultancy acceptable to the Bank. The MAVDT and the Bank will approve the terms of reference for these evaluations, based primarily on the logical framework and the indicative monitoring targets for the program. Once 50% of program resources have been committed, to gauge the response to the investments made in the first two years and to make any necessary adjustments to program execution. The final evaluation will be conducted once 90%

of the loan has been disbursed. The midterm and final evaluations will be financed with program resources.

- 3.29 **Ex post evaluation of SINA I:** In order to provide feedback on the natural resource management policies under which SINA I was carried out and that govern SINA II, the MAVDT will conduct an ex post evaluation of SINA I. Based on a representative sample, the evaluation will measure the environmental, social, and economic benefits of the previous operation.¹⁹ The MAVDT will submit indicative terms of reference for the ex post evaluation of SINA I to the Bank. **As a contractual condition, within six months after signature of the loan contract, the executing agency will submit the terms of reference to the Bank.** The ex post evaluation of SINA I will be conducted after the second year of SINA II execution, given the long gestation period for the environmental benefits associated with the SINA I projects. A comprehensive ex post evaluation can thus only be conducted several years after the projects have been carried out. The ex post evaluation of SINA I will be financed with program resources. **As a contractual condition, within two years after signature of the loan contract, the MAVDT will hire consulting services to conduct the ex post evaluation of SINA I.** The evaluation will be conducted based on the terms of reference prepared.
- 3.30 The MAVDT will compile, file, and keep all information, indicators, and parameters, including the AWP, the midterm reviews, and the final evaluation, which will help: (i) the Bank to prepare the project completion report (PCR); and (ii) the Office of Evaluation and Oversight (OVE) to conduct an ex post evaluation of the outcomes or impact of the program, if it so decides, in accordance with the policy guidelines set forth in document GN-2254-5.

I. Audit and control

- 3.31 The MAVDT will hire an independent auditing firm acceptable to the Bank that will be responsible for the program financial and operating audit, in accordance with the terms of reference approved in advance by the Bank. Operating audit reports that focus on reviewing samples of disbursements and procurements must be submitted on a semiannual basis within 60 days of the end of the six-month period, together with annual financial and operating audit reports within 120 days of the end of each fiscal year during the execution period. Beginning in the first year of program execution, and based on the findings of the financial and operating audits conducted during the first year of execution and at the borrower's request, the Bank can authorize the audits to be performed annually. Audit costs are part of the program cost and will be financed with loan proceeds.

¹⁹ As part of the analysis of the proposed program, an impact evaluation was conducted on a small number of projects financed under the previous operation.

IV. EXECUTING AGENCY

A. Ministry of the Environment, Housing, and Land Development

- 4.1 The MAVDT was formed through Decree 216 of 2003, combining the former Ministry of the Environment (MMA) and the housing and land development sectors previously under the Ministry of Development, which was dissolved. The MAVDT is a full member of the National Economic and Social Policy Council (CONPES) and chairs the National Environmental Council, which is charged with ensuring intersectoral coordination within the government of environmental policies, plans, and programs, which are functions that were moved to the MAVDT.
- 4.2 The MAVDT crafts environmental policies and standards, and implements them through institutions and instruments in the National Environmental System. It currently has approximately 18 environmental policies at different stages of implementation; of those, the new administration has chosen to prioritize promotion of the forests, solid waste, and cleaner production policies.
- 4.3 The MAVDT has two vice ministries. The following entities report directly to the Minister's office: the Special Administrative Unit for the National Natural Parks System, the Internal Control Office, the Legal Office (Contracts and Legal), the Education and Participation Office, the Communications Group, the Financial Planning and Multilateral Bank Program Group, and the Advisors. The Vice Ministry of the Environment has three divisions: Ecosystems, Sustainable Sector Development, and Water Supply and Basic and Environmental Sanitation. The Vice Ministry of Housing and Land Development has two divisions: Housing System and Land Development. The divisions of the Vice Ministry of the Environment will be responsible for carrying out the necessary technical activities for executing the environmental investments component.
- 4.4 To fulfill its functions, the MAVDT has a staff of 353, including 12 managerial staff, 78 advisors, 151 professionals, 31 technicians, and 81 assistants. This number does not include the 364 staffers at the Special Administrative Unit for the National Natural Parks System.
- 4.5 The 2003 MAVDT budget for the environmental area is approximately US\$42 million, of which US\$18 million is for operations and US\$24 million for investment.²⁰ The operating budget is being financed by State contributions, and the investment budget by State contributions and multilateral banks at a ratio of 1:2. SINA I provided a significant portion of that funding.

B. Autonomous Regional Corporations (ARCs)

- 4.6 The ARCs have three main management and administration organs. The Corporate Assembly is the main management organ and is composed of all the legal representatives of the subnational entities in the ARC's jurisdiction. The Board is the

²⁰ This figure includes the water and sanitation sector. In November 2003, the 2004 budget was under discussion.

administrative organ and is composed of the Governor(s) of the departments involved in the ARC, one representative of the President of the Republic, one representative of the MAVDT, the mayor(s) in question, two private sector representatives, one representative of the indigenous communities, and two representatives of nonprofit institutions. The Board-appointed Director General is the legal representative and senior-most authority of the ARC. An amendatory bill is before Congress that would change the management and administrative structure of the ARCs. The reform seeks primarily to reduce political influence in the work of the ARCs, but would not affect the technical investment program that the FONAM-EIF leverages.

- 4.7 Not all ARCs have the same exact internal structure, but they do share a basic structure composed of a General Secretariat, an Administrative and Financial Section, a Planning Section, an Environmental Quality and Assets Section, a Technical or Natural Resources Section, a Legal Office, an Environmental Licenses Office, Offices of Environmental Education, Systems, and Geographic Information, and Documentation Centers.
- 4.8 The ARCs perform a significant number of functions, some of the most important of which are: executing national environmental policies, plans, and programs set forth in the law through which the MAVDT approved or established the National Development Plan and the National Investment Plan, as well as regional policies, plans, and programs entrusted to them under the law, within their jurisdiction; serving as the highest environmental authority within their jurisdiction, in accordance with the superior norms and the criteria and guidelines established by the Ministry; and promoting and developing community participation in activities and programs for environmental protection, sustainable development, and proper management of renewable natural resources.
- 4.9 The ARCs have a total of nearly 5,100 employees, including managers, advisors, and professional, technical, and administrative staff. In 2003, ARC expenditures and investments totaled US\$217 million, of which 25% was for operations and 75% for investments. In all, 93% of that sum was financed with own revenue and 7% with a national contribution.
- 4.10 ARCs are public institutions and therefore are not immune to governance problems.²¹ To boost transparency in the management of the ARCs, the MAVDT issued Decree 3345 in November 2003, regulating how Directors are elected, which must be an open, public process carried out with support from public or private institutions that are experts in selecting personnel, in order to have a merit system for elections. Another administrative act stipulated that the Board had to hold the election at a public hearing. In addition to these initiatives, the Government of Colombia has presented a bill to amend Law 99 that would reduce political intervention in the ARCs, but would not affect the technical investment program that the EIF leverages. With respect to the use of program resources, the Operating Regulations require that

²¹ Document, “Índice de Integridad de las Entidades Públicas Nacionales. Resultados 2003.” [Integrity Index of National Public Institutions. 2003 Findings], Corporación Transparencia por Colombia, Bogota (2003).

an institutional and financial evaluation be performed for each ARC in the context of each project as described in paragraph 3.15.

C. Urban Environmental Authorities (UEAs)

- 4.11 Municipios and metropolitan areas with over one million inhabitants perform the same functions as the ARCs within their urban perimeter (Bogota, Cali, Medellín, Barranquilla). The metropolitan districts of Cartagena and Santa Marta also have Urban Environmental Authorities. These six entities can be subexecuting agencies for the environmental investments component, particularly for solid waste and cleaner production projects. Their counterpart contributions would come from their municipal budgets.

D. Colombian Institute of Hydrology, Meteorology, and Environmental Research (IDEAM)

- 4.12 The environmental information subcomponent will be executed through an agreement with IDEAM. Its main function is to lend scientific and technical support to the MAVDT, the ARCs, and other environmental authorities so that they can fulfill their respective functions, set regulations, assess environmental impact, and determine the status of the natural resources and environment in the national territory.
- 4.13 IDEAM is organized as a national public institution with administrative autonomy, legal capacity, and independent capital from resources and transfers for operations and investments appropriated directly from the national budget.

V. FEASIBILITY AND RISKS

A. Institutional and financial feasibility

- 5.1 The institutional set-up of the MAVDT, the ARCs, and the FONAM-EIF proved successful in SINA I and will be used again for SINA II. Congress is currently debating a bill that would change the administrative structure of the ARCs. Should those changes be made, they would not affect the program, since they would not alter significant functions, responsibilities, or sources of funds for implementing projects.
- 5.2 The organizational set-up for the National Environmental System can be established without greater difficulty and should be efficient, since the MAVDT has: (i) experience from executing SINA I; (ii) established execution mechanisms and methodologies; (iii) established financial and accounting systems that are up and running; (iv) trained staff, complemented by the personnel provided for in the program; and (v) model contracts and agreements in place.
- 5.3 As is explained later in the section on program sustainability, the financial feasibility of the program is based on the own resources of the ARCs, the priority that the Government of Colombia accords to the National Environmental System, and the interest that the subexecuting agencies and the Government of Colombia share in leveraging financial resources from both sources, with a view to developing and executing environmental projects and plans of national and regional interest. SINA I already proved the financial viability of the System, which would be further consolidated in SINA II, thanks to a substantial increase in the ARCs' own revenue in the last five years. The bulk of the US\$8.6 million local counterpart contribution for the program will come from these institutions.

B. Socioeconomic feasibility

- 5.4 The economic benefits of FONAM-EIF-financed projects will vary depending on the subject area. However, financing will only be provided to projects that generate benefits that cannot be appropriated by the executing agencies. Examination of the sample of projects that could receive financing shows that, in all cases, public benefits can be anticipated. However, given the diversity of subjects, a standard economic evaluation cannot feasibly be done in advance. Therefore, it is important that the eligibility criteria and evaluation methods proposed in the Operating Regulations be strictly applied.
- 5.5 The EIF Operating Regulations include a cost-benefit analysis for all projects over \$300,000 that can be assessed by such an analysis. Of those projects, only those that have an economic internal rate of return (EIRR) of over 12% would be eligible for financing. Experience proves that this is feasible. An analysis conducted during

SINA I of a select sample of projects related to microwatershed management showed an average EIRR of 17.1%. Based on that experience, having enough projects with a satisfactory economic return should not be an issue.

- 5.6 Moreover, the impact assessment by sample implemented as part of program preparation indicated that it was reasonable to expect a flow of net benefits to the communities involved. Their participation in execution has been key to their sustainability, although many of those benefits, because of their very nature, begin to materialize only several years after the project has been executed.

1. Institution-strengthening component for consolidation of SINA

- 5.7 This component was designed drawing on the institutional strengths that the SINA I program fostered. In addition to past achievements, it is considered viable for the following reasons:
- a. The component focuses on specific elements identified as weak or incomplete. IDEAM has satisfactory baseline data on which it is feasible to implement the proposed activities.
 - b. Colombia has extensive experience with policy-making and implementation. That cumulative capacity, together with the aim of focusing its efforts on a small set of policies, augurs a positive outcome. The feasibility of implementation is based on the process through which those policies were prepared, since there was broad participation by the relevant sectors.
 - c. The existence of a system like the National Environmental System supports the viability of the proposed training program. Here, the inclusion of technical and other elements to improve planning and environmental management will also be ensured.

2. Environmental investment financing component

- 5.8 Resources for this component will be channeled through the EIF. That Fund operates by demand and is considered viable for the following reasons:
- a. There is a pipeline of 48 projects totaling approximately US\$20 million that would be eligible, and some of those could be financed by the program, which ensures prompt program execution.
 - b. There is past technical experience from the SINA I program in managing and ensuring execution of the component.
 - c. The subject areas selected were chosen as priorities by the current administration and are consistent with the needs and lines of action set forth in the

environmental policy. Their clarity and permanence have already been established by the governing lines of action of this administration.

- d. The Environmental Investment Committee will enable all the different actors and units related to the projects to be involved. This Committee will examine financing requests and ensure compliance with environmental policy and the Operating Regulations. This decision-making body is helping to improve governance of the sector.
- e. The MAVDT has the technical know-how to meet the technical monitoring and evaluation needs of the projects and will provide institutional technical support to subexecuting agencies that so request.

C. Social and environmental feasibility

- 5.9 This operation does not qualify as a social equity enhancing project or as a poverty-targeted investment (PTI). That is because these are not explicit criteria of the FONAM-EIF and, since it operates by demand, it is not possible to guarantee that those objectives will be met. However, given the nature of the projects to be financed and the fact that the poor are typically the most severely affected by environmental degradation problems, there would presumably be a positive indirect impact on poor segments of the population.
- 5.10 The program was specifically designed to improve the environment, and important outcomes are expected in the recovery of natural resources, such as increasing forest cover, boosting environmentally-friendly productive activities, and improving the environmental quality of urban centers. Since the EIF operates by demand, these expectations cannot be quantified, however the experience of the National Environmental System and the results achieved both support this premise, as proven by SINA I.
- 5.11 The eligibility and evaluation criteria in the Operating Regulations stipulate that financing will only be provided for projects that contribute to the conservation, recovery, protection, and sustainable use of renewable natural resources and the environment. All the projects must be consistent with current environmental policies and must adhere to the environmental regulations developed by the former Ministry of the Environment and the MAVDT. Any negative impact that the projects could have is estimated to be minor, and proper mitigation measures must be an integral part of proposals presented for financing.
- 5.12 These measures are being fulfilled through the proposed project presentation, evaluation, and monitoring mechanism. The MAVDT, before submitting proposals to the Environmental Investment Committee, sends to its technical divisions a detailed analysis of the environmental and social impact, including the impact of cultural land uses, where relevant, to make sure that there are mitigation measures

in place that might be needed in specific cases. Only those projects that have the backing of the technical divisions of the Vice Ministry of the Environment can be submitted to the Committee for consideration. This procedure was used in SINA I with favorable results. In cases where studies are being financed for investments that, in accordance with Colombian regulations, require an impact assessment, the assessment will also be financed. The project team has reviewed these procedures and a sample of the environmental guidelines and finds them satisfactory.

- 5.13 With respect to the issue of gender and minorities, the program's environmental investment reported direct and indirect benefits in terms of gender and minorities (indigenous peoples and Afro-descendant communities). The experience from SINA I in microwatershed reforestation projects indicated that the female work force benefited most from the activities to supply inputs, such as seedlings. Similar benefits are anticipated from projects on conservation, restoration, and sustainable management of ecosystems, forests, and watersheds.
- 5.14 To continue these achievements, the Operating Regulations establish as criteria for the setting of priorities evidence of the benefits to those groups and of direct community involvement in preparing and executing the project. Moreover, the gender variable will be analyzed and monitored in projects where it is warranted.
- 5.15 In addition, indigenous communities were important participants in numerous SINA I projects. Priority eligible activities will be implementation of management and life plans for collective Afro-descendant territories and indigenous reserves that fit in with the subject areas covered by the program. These communities can also partner with the ARCs to present projects, for which they would be the beneficiaries along with the municipios and other subnational entities.

D. Benefits

1. Environmental

- 5.16 In the area of natural resources, the reforestation and microwatershed management programs begun under SINA I will continue. This will increase protective and productive-protective forest cover. Implementation of multiple environmental management plans formulated under SINA I will also improve the status of several ecosystems. Moreover, plans for managing water-producing watersheds, wetlands, mangroves, and moors will be implemented. As a result, the supply of environmental services will increase. This includes more and higher-quality water, carbon sequestration, and protection against natural hazards.
- 5.17 In terms of urban environmental quality, the proposed solid waste management activities would improve the provision of public sanitation services by subnational entities. In the medium term, the program aims to increase the amount of garbage disposed of properly and reduce the dumping of pollutants into bodies of water. The

foregoing will enhance monitoring and control of productive activities, which will improve environmental quality indices. Moreover, the improved information that will be consolidated by Colombia's National Environmental Information System (SIAC) will allow for more efficient allocation of resources, which in the long term will benefit the population.

2. Sustainability

- 5.18 The sustainability of SINA II is based both on the priority that the Government of Colombia accords to the program, the high level of involvement of the stakeholders in the National Environmental System, and the program's sources of counterpart funding. The local counterpart financing needed for program execution is equivalent to US\$8.6 million and will come primarily from own revenue of the subexecuting agencies in the National Environmental System. The local counterpart contribution will primarily cover GPFBM operating expenses and part of the investments. In addition, for the projects financed under the environmental investment subcomponent, the subexecuting agencies are responsible for maintenance costs and other recurrent expenditures and associated costs that are not covered under the program.
- 5.19 Own revenue of the Autonomous Regional Corporations (ARCs) has been and continues to be the single largest source of counterpart contributions, since the government's contributions have in the past and continue to be squeezed by fiscal constraints. Contributions from own revenue have mushroomed from US\$67 million in 1998 to US\$161 million in 2003 (an increase of 140% in five years) for investments and from \$32 million to US\$40 million (up 25%) for operations. In the last seven years, 84% of contributions to the SINA came from own revenue of the ARCs.
- 5.20 The ARCs' own revenue comes from: (i) the environmental portion of property tax charges; (ii) transfers from the electricity sector; (iii) punitive and compensatory fines; (iv) water use fees; (v) licenses and permits; (vi) fines and penalties; (vii) sales of goods and services; and (viii) interagency agreements. The program is expected to help strengthen the ARCs, so that they boost collections for these items, thus ensuring that own revenue would continue to guarantee financing of the counterpart contribution for the program.
- 5.21 Without the program, the MAVDT would not have the tools to coordinate national and regional environmental priorities. The program has the capacity to be a tool for structuring expenditures for environmental investments made with ARC funds. The high priority that the Government of Colombia accords to the SINA, the program components, and the mechanisms established in the Operating Regulations all ensure that program resources, including funds from the ARCs, are efficiently allocated. On the one hand, the institution-strengthening component seeks to improve the environmental information system and, specifically, to produce basic

environmental indicators for the ARCs to use. On the other hand, the eligibility criteria for projects, the technical, environmental, and economic evaluation criteria for financing projects under the program, and the monitoring and evaluation tools all seek to finance viable projects, so as to ensure better allocation of resources.

3. Consolidating achievements from SINA I

- 5.22 SINA II seeks to integrate the program into the MAVDT and to achieve more active participation by the ARCs and other stakeholders in the System. The environmental investments component will continue to cofinance projects on issues that are a priority for the Government of Colombia, by structuring expenditures and leveraging resources.

E. Risks

1. Institutional reforms

- 5.23 **Risk.** A bill to amend Law 99 is before Congress; it seeks primarily to curb political influence in the ARCs, by modifying their management structure. The bill, however, could be amended during passage. **Mitigants.** The bill does not contain changes that would affect program implementation. Any risk related to legal changes are mitigated because the technical and planning functions of the ARCs that are necessary for program execution will continue to be carried out under the three-year action plans that the ARCs must develop based on technical proposals, and the aforementioned amendment would not change that fact. If for any reason a provision were introduced into the bill that would change this assessment, the project team and the MAVDT have agreed that they would review it to decide on the steps that would be necessary for program execution to proceed as planned.

2. Fiscal constraints

- 5.24 **Risk.** The loan operation is not immune to possible budget cuts, particularly fiscal caps on public investment, which in the future could affect the nation's investment budget, as it has in the past. **Mitigants.** The lending policy adopted through the National Economic and Social Policy Council (CONPES) document stipulates that line items for investments financed through external loan operations will have priority, which minimizes this risk. With regard to local counterpart funds, the contribution for the environmental investment component will come primarily from the ARCs, most of whose resources are own revenue established by law; that revenue is not contingent on the national budget. This makes that portion of the local counterpart contribution more secure. The risk regarding the local counterpart contribution for the institution-strengthening component is minimized through the provision that was adopted, giving priority in the Annual Cash Management Program to counterpart funding for loan operations.

- 5.25 Another factor that points to the financial feasibility and sustainability of the program and the local counterpart financing is that in SINA I the local contribution, which came from the government and from own revenue of the ARCs, exceeded the pari passu amount set in the loan contract by 67% (US\$69.7 million instead of US\$41.5 million). This was due to the effort made by institutions and communities during a period in which Colombia was experiencing one of the worst recessions in its history.

3. Law and order

- 5.26 **Risk.** The law and order situation and the State's weak presence in large areas of the country create an environment in which it is difficult to execute and supervise projects. **Mitigants.** This situation is not new in Colombia, however the local participation mechanisms that the program will promote are an ideal way to mitigate this risk. In that regard, local communities are involved in formulating and executing annual work plans and projects. Moreover, when the law and order situation so warrants, local supervision mechanisms will be commissioned.

LOGICAL FRAMEWORK
PROGRAM TO SUPPORT THE NATIONAL ENVIRONMENTAL SYSTEM (SINA II) – CO-0262

OBJECTIVES	VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
A. GOAL To improve the status of natural resources and the environment, so as to ensure sustainable development and improve environmental management by SINA agencies.			
B. PURPOSE 1. To improve how the National Environmental System (SINA) implements and monitors environmental investments and policies.	1.1 Broad public recognition of the importance of protecting natural resources in the project's area of influence by the end of the program. 1.2 Environmental investments meet their objectives: (a) Two years after the program is completed, 85% of the plant cover established under the program (20,000 hectares) is still preventing environmental degradation. (b) Two years after the program is completed, at least 80% of the solid waste and cleaner production technical-assistance programs are being or have been implemented.	1.1. Survey for the final program evaluation 1.2 (i) IDEAM Reports; and (ii) MAVDT Reports	1.1 (i) The Government of Colombia continues to accord priority to environmental issues once the program is completed; and (ii) Macroeconomic conditions in the country do not encourage overexploitation of natural resources. 1.2 See item 1.1
C. Components 1. Institutional strengthening for consolidation of SINA Subcomponents: (i) Environmental Information System; (ii) instruments and mechanisms for implementation of environmental policies; (iii) education and training in the importance of conservation and	1.1 SINA institutions and other users have access to periodic, specific, appropriate, and timely environmental information through the Environmental Information System.	1.1 (i) Inspection by the Bank specialist; (ii) inspection of the System by the midterm and final evaluators; and (iii) GPFBM reports.	1.1 (i) The executing agencies and program beneficiaries are receptive, and (ii) the financial resources of the ARCs do not change significantly.

OBJECTIVES	VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
management of natural resources and the environment; and (iv) technological support for the MAVDT			
	<p>1.2 At the end of the four-year implementation period, three priority policies have been implemented: forests, solid waste, and cleaner production.</p> <p>1.3 The MAVDT's continuing training program on environmental issues is established in the first year, and approximately 150 professionals in the National Environmental System are trained annually from years two to four.</p> <p>1.4 At the end of the first year, the MAVDT has approved the dissemination plan and from years two to four a target population of 200,000 persons per year learn about environmental issues and their importance to sustainable economic development.</p> <p>1.5 At the end of the first two years of program execution, the offices of the Vice Ministry of the Environment are outfitted with computers, printers, copiers, and other hardware that was found to be in poor condition or technologically obsolete.</p>	<p>1.2 (i) Evaluation by the midterm and final evaluators; (ii) GPFBM reports.</p> <p>1.3 Evaluation by the midterm and final evaluators.</p> <p>1.4 Evaluation of the dissemination results conducted by the midterm and final evaluators.</p> <p>1.5 Inspection by the teams set up by a specialist in the Country Office in Colombia (COF/CCO).</p>	<p>1.2 See item 1.1</p> <p>1.3 See item 1.1</p> <p>1.4 See item 1.1</p> <p>1.5 See item 1.1</p>
<p>2. Financing environmental investments Priority projects in the areas of: (i) conservation, restoration, and sustainable management of forest ecosystems in watersheds; (ii) solid waste management; and (iii) cleaner production are being financed and executed. (*)</p>	<p>2.1 At the end of the program, projects totaling US\$24.9 million in the three areas mentioned have been financed, all of which meet the established criteria.</p> <p>2.2 At the end of the second year of execution, at least 35% of the resources earmarked for the Environmental Investments Fund have been committed.</p>	<p>2.1 (i) Inspection of implemented projects and evaluation by the midterm and final evaluators; and (ii) individual project monitoring reports</p> <p>2.2 See item 2.1</p>	<p>2.1 See item 1.1</p> <p>2.2 See item 1.1</p>

OBJECTIVES	VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
	<p>2.3 At the end of program execution, a minimum of 80% of projects with an execution period of up to two years that were approved during the first two years of implementation have been completed.</p> <p>2.4 At the end of the fourth year of execution, forest rehabilitation activities in 20,000 hectares are under way or have been completed.</p>	<p>2.3 See item 2.1</p> <p>2.4 See item 2.1</p>	<p>2.3 See item 1.1</p> <p>2.4 See item 1.1</p>
<p>ACTIVITIES</p> <p>1. The activities are listed in the physical execution schedule.</p>	<p>BUDGET (in thousands of U.S. dollars)</p> <p>1.1 The budget is provided in the physical execution schedule.</p>	<p>1.1 Budget execution report</p>	<p>1.1 (i) The physical space is available; (ii) disbursements are made in the planned quantities and timeframes; (iii) the law and order situation allows for implementation of project activities; (iv) there is demand among the ARCs and subexecuting agencies; and (v) policy reforms support program implementation.</p>

(*) Financing will go to preinvestment and investment projects that: (i) are consistent with environmental policies; (ii) are aimed at conserving, recovering, protecting, enhancing awareness of, and using natural resources and improving the environment; (iii) are self-sustainable over time; (iv) involve civil society in their various stages; (v) generate revenue and create jobs; (vi) involve several institutions and guarantee cofinancing; (vii) produce real measurable benefits; and (viii) fulfill the specific eligibility criteria for their subject areas.

**PROGRAM TO SUPPORT THE NATIONAL ENVIRONMENTAL SYSTEM (SINA II)
(CO-0262)**

TENTATIVE PROCUREMENT SCHEDULE

Item	Total amount (US\$)	Number	Method	Year
A. Coordinating Unit				
1) Staffing	76,800	480 person/months	Competition	10 people/year for four years
2) Goods				
a) Office equipment	81,500	Several	LCB/ICB	Year 1
b) Furniture	10,000	Several	LCB	Year 1
c) Miscellaneous	5,000	Several	LCB	Year 1
3) Consulting services				
a) Local	40,000	16 person/months	Competition	4 consultants/year for four years
b) International	80,000	8 person/months	Competition	2 consultants/year for four years
B. MMA				
1) Staffing	79,200	528 person/months	Competition	11 people/year for four years
C. Component I				
1) Staffing	1,823,000	Several		(Year 1: 15%) (Year 2: 35%) (Years 3 and 4: 25% each)
2) Consulting services	1,519,000	Several	LCB	(Year 1: 11%) (Year 2: 35%) (Years 3 and 4: 27% each)
3) Goods				
a) Materials and equipment	1,178,000	Several	LCB	(Year 1: 10%) (Year 2: 55%) (Year 3: 19%) (Year 4: 16%)
D. Component II				
1) Unspecified				
E. External audit	120,000	4 consulting contracts	LCB	One/year for four years
F. Evaluation	300,000	3 consulting contracts	LCB	One at the end of the second year, one at the end of the fourth, and one impact study

LCB Local competitive bidding
ICB International competitive bidding